Goal	Objectives/ Strategies	Activities	Responsible Organization	Time Period	Outcome & Process Measures
		4b) Facilitate education and training to network members regarding the implementation of telehealth applications.	4b) Coordinated by InHN Telehealth Applications Committee and IRHA Project Director	4b) Begin by Quarter 1 and throughout the project	Process Measures: • Monthly meetings of the I n ʻʻ Telehealth Applications committees addressing implementation issues by Quarter 1 • Activities of the Telehealth Applications committees to coordinate education and training • Commitment of health care providers to implement new or expand existing telehealth applications by Quarter 3 • Implementation of the telehealth education track at IRHA annual meeting • Commitment of health care providers/network members to implement selected telehealth applications by Quarter 3 • Promote participation in Indiana Telehealth Advisory Consortium American Telemedicine Association, health information exchange by Quarter 1 • Work with the State of Indiana on improved telemedicine reimbursement policy to support new systems of care including telemedicine applications begin by Quarter 2
		4c) Solicit commitment of health care providers to implement telehealth	4c) Committees, IRHA Project Director, and telecom providers	4c) Begin by Quarter 3 and ongoing as needed throughout the project	
		4d) Implement telehealth education at IRHA 2007 & 2008 Annual Conference	4d) Advisory Board, Project Director, and IRHA staff	4d) June 2007 (Quarter 1, Year 1) and June 2008 (Quarter 1, Year 2)	
		4e) Health care providers receive consultation regarding implementation of telemedicine	4e) Health care providers, current telemedicine implementers, MATTR	4e) Begin by Quarter 2 and ongoing as needed throughout the project	
	5) To develop a strategic plan to address long-term planning and sustaina-bility of the network in conjunction with the work of the InSRHN planning grant activities funded by HRSA's, ORHP.	5a) Work in collaboration with InSRHN members to develop a unified strategic planning	5a) IRHA Project Director and Advisory Board Members	5a) Quarter 1	5) Outcome Objective: By the end of year two, the *Indiana Health Network* will have developed a strategic plan that will insure sustainability of the project past the funding period of the network grant.
		5b) Implement strategic planning session	5b) IRHA staff, Co-Applicants, Financial Operations Committee	5b) During Quarter 1	

Goal	Objectives1 Strategies	Activities	Responsible Organization	Time Period	Outcome & Process Measures
		5c) Lmplement Rural Health Works to build a local business case for collaboration among rural health care and business	5c) Project Director and identified Partner Organizations	5c) Begin Quarter 2 and throughout the project as appropriate	Process Measures: • Initial strategic planning session implemented during Quarter 1 • Annual strategic planning sessions to review and modify the initial plan in Quarter 1 of year 2 • Utilization of the Rural Health Work model implemented with telecom providers and local communities by Quarter 2 • Implementation of the USAC hospital evaluation to encourage participation in the USF by Quarter 2 • Continue integration of rural health goals and objectives identified hy the Office of Community and Rural Affairs and the Indiana State Office of Rural Health • Identification of potential collaboration with economic development projects that impact rural Indiana will begin during Quarter 2 and throughout the project
		5d) Integrate USAC evaluation with hospitals to determine eligibility for USF	5d) Project Director and participating hospital leaders	5d) Begin during Quarter 2 and throughout the project as appropriate	
		5e) Continue integration of RISE 2020 and SORH goals into network	5e) Advisory Board members, Committees, and Project Director	5e) Incorporated in planning and will continue throughout the project	
		5f) Identify integration points with economic development activities and participate as appropriate	5f) IRHA, Project Director, Co-Applicants, Advisory Board members	5f) Begin Quarter 2 and ongoing throughout the project	
		5g) Educate rural commun-ity leaders about programs and services available thru the OCRA and work collaboratively to secure dollars for rural communities to support local, rural, business development initiatives related to this project	5g) Project Director and ITA members	5g) Begin Quarter 3 and ongoing throughout the project	

Table II: Schedule/Timeline of Network Activities by Quarter

Activities Completed By Project Quarter	1st Year				2nd Year			
	1	2	3	4	1	2	3	4
I. Network Management Development								
• Project Director & Project Assistant hired		xx						
• Convene monthly advisory board & committee meetings	xx	xx	xx	xx	xx	xx	xx	xx
• Appoint chairs of identified committees	xx							
• Recruit additional advisory board members and network members	xx	xx	xx	xx	xx	xx	xx	xx
• Develop communication plan	xx							
II. Strategic Planning/Sustainability Activities								
• Planning for initial strategic planning session begins	xx							
• Strategic planning sessions occur annually	xx				xx			
• Strategic planning document revised annually		xx				xx		
• Implement Rural Health Works with rural health and community leaders		xx	xx	xx	xx	xx	xx	xx
• Implement USAC evaluation with participating health care providers		xx	xx	xx	xx	xx	xx	xx
• Integrate state direction (RISE 2020, SORH, IEDC) into network activities	xx	xx	xx	xx	xx	xx	xx	xx
• Education rural community leaders about services available thru OCRA & secure funding to support rural development initiatives		xx	xx	xx	xx	xx	xx	xx
III. Network Development & Utilizati								
• Network design study contractor secured	xx							
• Initiate network design study	xx							
• Develop regional technology plans for use in FCC's RFP process		xx						
• Communicate network design requirements to USAC		xx			xx			
• Review of bids submitted to FCC			xx			xx		
• Notify providers regarding bid selection(s)			xx			xx		
• Complete/implement work as prescribed in RFPs			xx	xx	xx	xx	xx	xx
IV. Telehealth Education, Training & Implementation								
• Telehealth applications committee meets to address issues surrounding the expansion and implementation of telehealth activities via the network	xx							
• Provide education and training regarding telehealth implementation	xx	Xx	xx	xx	xx	xx	xx	xx
• Solicit commitment from members to implement telehealth applications			xx	xx	xx	xx	xx	xx
• Implement Telehealth Training Track at IRHA Annual Conference	xx				xx			
• Provide consultation, technical assistance and support regarding telehealth applications		xx	xx	xx	xx	xx	xx	xx
V. Evaluation								
• Evaluation Coordinator selected		xx						
• Data collection for evaluation activities initiated	xx	xx	xx	xx	xx	xx	xx	xx
• Outcome objectives and process measures will he monitored by the Project Director in regards to completion times, obstacles encountered, methods that work, etc.	xx	xx	xx	xx	xx	xx	xx	xx
• Qualitative information regarding implementation of identified activities monitored by the Project Director	xx	xx	xx	xx	xx	xx	xx	xx
• Annual evaluation report completed and submitted to network members, statewide partners, and the FCC					xx			xx
• Reports completed and submitted to the FCC as required	xx	xx	xx	xx	xx	xx	xx	xx

Vision:

To establish a high speed health telecommunication information system capable of erasing distance as a barrier to accessing high quality health care for all people in Indiana.

Program Goal I:
To improve the health and well-being of Indiana residents, particularly those in rural areas, through the utilization of a dedicated broadband health network to deliver telehealth applications including but not limited to telemedicine, health information exchange, distance education and training, public health surveillance, emergency preparedness, and trauma system development.

Overview of Indiana Health Network's Objectives/Strategies:
1. **To implement the management structure necessary to support the successful development and implementation of the Indiana Health Network.**
2. **To construct a dedicated broadband network that will support the Indiana Health Network.**
3. **Increase broadband access to and connectivity among Indiana's health care providers.**
4. **Increase the utilization of telehealth applications**
5. **Develop a strategic plan that will address long-term planning and project sustainability of the network in conjunction with the work of the Indiana Statewide Rural Health Network planning grant activities as funded by HRSA's Office of Rural Health Policy.**

Detailed information regarding the previously listed objectives/strategies of the network is included in the following sections.

Objectives, Strategies & Activities to Reach the Goals of the Network:
The *Indiana Health Network* is designed to improve the health outcomes/health status of patients in Indiana. All of the strategies of the network are aimed toward this end. This proposal is centered on the ideology that by accessing high-speed connectivity at adequate bandwidths that health care providers will be able to utilize HIT and telehealth applications, which will improve access to care, improve training opportunities of health care providers, improve recruitment and retention of rural clinicians; and improve access to health education information. Accordingly if the *Indiana Health Network* is implemented and the applications that require high-speed connectivity are implement the result will include improved access to care, particularly specialty care; improved access to education and training for health care professionals; improved health outcomes and health status; and ultimately, improved quality of life for residents of Indiana.

The strategies and activities described in this application are designed to bring about the listed improvements and are set in a time frame intended to accomplish maximum results.

Objective/Strategy I: To implement the management structure necessary to support the successful development and implementation of the Indiana Health Network.

Activities Relate to Strategy 1. Responsible Agent, and Project Period:

Project Period	Activities & Responsible Agents
1a) Within the first 60 days and ongoing as needed to sustain operations of the network	The Indiana Rural Health Association in collaboration with Clarian Health Partners. St. Vincent Health. Bloomington Hospital/Bloomington E-Health Collaborative, Union Hospital's Richard G. Lugar Center for Rural Health. and the Indiana Telecommunications Association as co-applicants will convene the initial meeting of the Indiana Health Network within the first 60 days of notification of funding. The statewide partners and health care providers will participate in advisory board meetings and identify potential committee chairs for each of the network committees (i.e. financial operations, technology/network design, and telehealth applications). Advisory board meetings will occur quarterly at a minimum and committee meetings will occur as needed to insure successful implementation of the *Indiana Health Network.*
1b) Begin during Quarter 1 and ongoing as needed to sustain operations of the network	*Indiana Health Network* advisory board members with assistance from the IRHA Project Director will appoint chairs of the identified committees. Chairs of committees will guide the activities of their subsequent committee, which will be comprised of network. These committees will provide the network with information and recommendations that will guide the implementation of core activities of the network including but not limited to developing the sustainability plan, reviewing and providing feedback regarding the network design study, network development, and providing the support needed to initiate the use of additional telehealth applications, etc. The committees will begin meeting during Quarter 1 and will continue to meet as needed throughout the project.
1c) Begin during Quarter 1 and continue throughout the project as needed	*Indiana Health Network* advisory board members and committee chairs will assess and identify the areas where expertise is needed and subsequently lacking within the advisory board. Subsequently, the advisory board members and committee chairs will identify individuals the have needed expertise and solicit their involvement in network activities. The recruitment of additional advisory board and committee members will begin during Quarter 1 and will continue throughout the project as needed.
1d) By Quarter 2	The Indiana Rural Health Association with input from the co-applicants and advisory board members will implement a search process to identify the best candidate to fulfill the role of the *Indiana Health Network,* Project Director. A Project Director will be hired by the beginning of Quarter 2.
1e) Advisory Board Quarter 1, committees by Quarter 2	The *Indiana Health Network* advisory board will meet quarterly at a minimum and committees, will convene as often as needed to facilitate implementation of the workplan. The initial advisory board meeting will occur by Quarter 1 and committee meetings will begin by Quarter 2, which will occur throughout the project as needed.
1f) By the end of Quarter 1	The Indiana Rural Health Association/Project Director, will develop a comprehensive communication plan that will be used to direct communications to the various key stakeholders in this project. This will include website development and integration and linkages into existing web sites by the member organizations.

Stratem 1 Outcome Measures:
By the end of Quarter 1, the management structure and staff necessary to support the successful development and implementation of the ***Indiana Health Network*** will be established.

Strategy 1 Process Measures:
- Development of advisory board and committees and commencement of meetings by the end of Quarter 1
- Distribution of minutes and other network information via website by the end of Quarter 1
- Recruitment of additional network members as needed that will begin during Quarter 1
- Hiring of the Indiana Health Network Project Director and Project Assistant by Quarter 2
- Development of Communications Plan that will be distributed to key stakeholders by the end of Quarter 1
- Implementation of the network communication plan will begin by Quarter 2.

Objective/Strategy 2: To construct a dedicated broadband network that will support the Indiana Health Network.

Activities Relate   to Stratem 2. Responsible Agents/Persons, and Completion Dates:

Completion Dates	Activities & Responsible Agents
2a) Within the first 30 – 45 days of award notice from FCC	The Indiana Health Network Advisory Board and Technology/Network Design Committee will secure a vendor to conduct the network design study within the first 30-45 days following award notice. The network design study will be performed in conjunction with the Technology/Network Design Committee and the Indiana Health Network Advisory Board.
2b) During Quarter 1	The Indiana Rural Health Association, as the lead applicant, with direction from the Technology/Network Design Committee will commission/initiate a network design study that determines explicitly the best method for deploying the Indiana Health Network. The Technology/Network Design Committee will prepare a request for proposal that will be widely distributed in order to facilitate discussion on network structure and function. It is anticipated that the network design study will begin no later than 60 days after the vendor is selected to conduct the study.
2c) During Quarter 2	In-keeping with the findings from the Network Design Study, the Technology/Network Design Committee in collaboration with the Project Director will develop and/or oversee the development of regional technology plans that will be used by the various telecom vendors during the RFP process conducted under the direction of the Universal Service Administration Corp. (USAC). Due to paperwork processing and procedures that are controlled by the USAC, we are unable to identify completion dates for this activity. However, the Project Director will monitor the process and identify any unresolved issues in order to avoid unnecessary delays.
2d) By the end of Quarter 2	The Project Director will communicate the network design requirements, and communicate the USAC mandated process to all interested vendors in all regions as necessary. USAC will manage the RFP process for all vendors via their website in order to facilitate the receipt of competitive bids for designated

	components of the network. Due to paperwork processing and procedures that are controlled by the USAC, we are unable to identify completion dates for this activity. However, the <u>Project Director</u> will monitor the process and identify any unresolved issues in order to avoid unnecessary delays.
2e) During Quarter 3	The <u>Technology/Network Design Committee in collaboration with the Project Director</u> will review bid process as administered by the USAC and provide updates to key stakeholders. Unresolved problems or time delays will be monitored by the <u>Project</u> Director.
2f) Complete by Quarter 3 (Dependent on USAC code processing & weather)	The <u>advisory board and Project Director</u> will notify providers regarding bid selection in response to the bids received in response to *Indiana Health Network* RFPs. Due to paperwork processing and procedures that are controlled by the IJSAC, we are unable to identify completion dates for this activity. However, the <u>Project Director</u> will monitor the process and identify any unresolved issues in order to avoid unnecessary delays.
2g) Begin by Quarter 3. Dependent upon USAC	<u>Telecom and other service providers with oversight from the advisory board and the Project Director</u> will complete the work prescribed in the year one RFPs for network development, construction, management, technical assistance and others as appropriate. It is anticipated that this work will begin by January 11, 2008 and will continue until completed. The anticipated completion date for initial network construction activities is by the end of Quarter 4.

Strategy 2 Outcome Objectives:
By the end of year 2, the necessary high-speed connections will be in place to fully support the *Indiana Health Network.*

Strategy 2 Process Measures:
- Network design study initiated within the first 30 – 45 days of notice of award
- Network design study completed by the beginning of Quarter 2
- Communication plan developed during Quarter 1
- Website development completed to facilitate communication among network members during Quarter 1
- RFPs for network development and implementation completed by USAC (anticipate during Quarter 2)
- Bids submitted in response to Indiana Health Network RFPs during Quarter **3**
- Network development activities (i.e. management of the network, technical assistance/support, etc.) initiated as prescribed in the year one RFP(s) begins during Quarter 3
- Network development activities successfully implemented/completed as prescribed in the year one RFP(s) by the end of Quarter **4**
- Completion of tasks as identified in the workplan by rural hospitals and telecom vendors is monitored to ensure timelines and to insure that goals and objectives are reached.
- Preparation of year two FCC Rural Health Care Pilot Program grant for continued network development will begin during Quarter 3

Objective/Strategy 3: Increase broadband access to and connectivity among Indiana's health care providers.

Activities Related to Strategy 3, Responsible Agents/Persons, and Completion Dates:

Completion Dates	Activities & Responsible Agents
3a) Begin during Quarter 3 and throughout the project	The participating health care providers will connect to the ***Indiana Health Network.*** This will be facilitated by the networks regional telecommunications provider who is selected by the **USAC** as the RFP selected and each rural hospital. Health care providers will begin connecting to the network by May 1,2008 and will continue until all identified health care providers are connected that are identified during the year one workplan.
3b) Begin by Quarter **3** and throughout the project	The participating health care providers will receive technical assistance and support from the ***Indiana Health Network*** via the selected. It is anticipated that technical assistance will continue until all identified health care providers have successfully connected.
3c) Begin during Quarter 1 and throughout the project	Members of the Indiana Health Network, including the Project Director, health care providers, advisory board members, committee members. and partner organizations will recruit additional health care providers to join the network. Recruitment of new members will begin at the outset of the project (June 1,2007) and will continue throughout its entirety.
3d) Begin during Quarter 1	Members of the Indiana Health Network, including the Project Director, health care providers, advisory hoard members. committee members. and partner organizations will work to determine way to include and integrate the Indiana Office of Technology into the Project due to their technical and training resources that can be deployed on this project.

Strategy 3 Outcome ***Objective:***
By the end of year 2, 100% of Indian's rural hospitals will have improved access to high speed bandwidth communications as a result of the activities of the Indiana Health Network.

Strategy 3 Process ***Measures:***
- The hospitals that will connect to the network in year one, as identified in the network design study, will connect by the end of Quarter **4**
- The provision of Technical assistance is available beginning during Quarter **3** and will be available throughout the project
- Additional health care providers will be recruited to participate in network planning and implementation activities at the onset of the project.

Objective/Strategy 4: ***Increase the utilization of telehealth applications.***

*Activities Related to Strategy **4**. Responsible Agents/Persons, and Completion Dates:*

Completion Dates	Activities & Responsible Agents
4a) Begin Quarter 1 and throughout the project	The committees of the *Indiana Health Network* will assist participating health care providers with implementation and coordination of telehealth applications. This will be facilitated by groups such as the IHHA Rural Council of Administrators, Telemedicine Advisory Consortium group, the Regenstrief MATTR project coordinator, or the Indiana State Office of Rural Health. Health care providers will begin connecting to the network by Quarter **4** and will continue as needed throughout the project.
4b) Will begin in Quarter 1 and throughout the project	The Telehealth Applications Committee with participation by the Project Director will facilitate telehealth education, demonstrations, and training to participating health care providers and other network members. This will begin the summer of 2007 with a special telehealth training track at the Indiana Rural Health Association Annual Conference in Evansville.
4c) Begin by Quarter **3** and ongoing as needed throughout the project	The Telehealth Applications Committee with participation by the Project Director will solicit the commitment of participating health care provider to begin or expand implementation of telehealth applications via *the Indiana Health Network.* Participating telecom providers will work with the rural hospitals to develop functionality.
4d) June 2007 (anticipate Quarter I, Year 1) and June 2008 (anticipate Quarter I, Year 2)	Advisory board members in collaboration with staff of the Indiana Rural Health Association will implement and host the annual telehealth education track during the Indiana Rural Health Association's 2007 & 2008 Annual Conference. IRHA's annual conference is historically attended by at least 500 rural health care providers and professionals from across the State of Indiana and will serve as an ideal forum for such an event, during which the FCCs Rural Health Pilot Program would be showcased. The association's commitment to the advancement of telehealth in rural Indiana is formidable, which is demonstrated by the Association's collaboration with the Indiana Telehealth Advisory Consortium (TAC) to provide a significant focus on telehealth during the Indiana Rural Health Association's 2007 Annual Conference titled *Rural Health: The Next Generation,* which will take place on June 6 – 7, 2007 at the Evansville Convention Center. One of the keynote speakers for this event is Marc Overhage, Director of Medical Informatics for the Regenstrief Institute and concurrent sessions addressing telehealth include Paying for Telehealth, A Clinicians Perspective on Using Telemedicine to Provide Mental Health Consultations, and Telemedicine: The Future of Healthcare Delivery. Information regarding the conference is available on-line at www.indianaruralhealth.org. The 2008 Annual Conference will be held on June **16 – 17**, 2008 at the French Lick Casino & Resort.
4e) Begin by Quarter 2 and ongoing as needed throughout the project	The participating health care providers will receive free consultation with current providers of telemedicine. In addition, the network will utilize the expertise of MATTR from the Regenstrief Institute.

Strategy 4 Outcome Objective:

By the end of year 2, the utilization of telehealth applications over the network will increase utilization by 50% among participating health care providers/network members.

By the end of year 2, the utilization of coordinated telehealth applications will have increased by 100% among participating health care providers/network members.

Strategy 4 Process Measures:

- Monthly meetings of the InHN Telehealth Applications committees addressing telehealth applications and implementation issues by Quarter 1
- Activities of the Telehealth Applications committees to coordinate education and training regarding telehealth applications that will begin by Quarter *3*
- Commitment of participating health care providers to implement new or expand existing telehealth applications by Quarter *3*
- Implementation of the second annual telehealth education track at the Indiana Rural Health Association's Annual Goal where the operations and benefits of the *Indiana Health Network* will be addressed in Quarter 1 of Year 2
- Commitment of health care providers/network members to implement selected telehealth applications by Quarter *3*
- Promote participation in Indiana 'TelehealthAdvisory Consortium by Quarter 1
- Promote participation in American Telemedicine Association by Quarter 1
- Promote participation in health information exchange via organizations like the Indiana Health Information Exchange or Bloomington's E-Health Collaborative by Quarter 1
- Work with the State of Indiana on improved telemedicine reimbursement policy to support new systems of care including telemedicine applications begin by Quarter 2

Objective/Strategy 5: Develop a strategic plan that will address long-term planning and project sustainability of the network in conjunction with the work of the Indiana Statewide Rural Health Network planning grant as funded by HRSA's Office of Rural Health Policy.

Activities Related to Strategy 5, Responsible Agents/Persons, and Completion Dates:

Completion Dates	Activities & Responsible Agents
5a) During Quarter 1.	The Project Director and advisory board members will work with the leaders of the Indiana Statewide Rural Health Network through HRSA funding and will work with this group to develop a unified strategic planning process given the congruence of identified goals and objectives of both projects and overlap of network members. An outside consultant will facilitate the strategic planning session, through HRSA's Office of Rural Health Policy. The strategic plan that is developed will expand the strategies within this application and address sustainability of the network.
5b) Hold the strategic planning session during Quarter 1.	The staff of the Indiana Rural Health Association. Co-Applicant Organizations, and members of the Financial Operations Committee will work with the identified outside evaluator and members of the Indiana Statewide Rural Health Network to host a strategic planning session that will expand strategies within this application and address sustainability of the network.

5c) Begin during Quarter 2 and throughout the project	The Project Director and identified partner organizations will utilize the Rural health Works model and local rural hospital data to assist the Indiana Telecommunications Association and the local telecom providers build a local business case for rural hospital and industry collaboration to support the sustainability of the *Indiana Health Network* .
5d) Begin during Quarter 2 and throughout the project as appropriate	The Project Director in collaboration with the Participating hospital will integrate the USAC hospital evaluation into each identified site in an effort to identify the rural providers that are eligible for USF support. By utilizing the USF, participating health care providers will lower broadband costs while building interest in the USF program, which will lead to long-term sustainability of the *Indiana Health Network.*
5e) Incorporated into the planning process. Ongoing throughout the project	The advisory board, committees. and Project Director will work to continue the integration of the goals and objectives of RISE 2020 and those of the Indiana State Office of Rural Health into implementation of the *Indiana Health Network.* Given the fact that the goals, objectives, and strategies of the network are closely aligned with the previously mentioned state initiatives, it is anticipated that the State of Indiana will continue to be supportive of the network, which will aid with sustainability.
5f) Begin Quarter 2 and ongoing throughout the project	The Project Director, lead applicant, co-applicants, and advisory board members will identify program integration opportunities with economic development projects that include the purchase and utilization of telemedicine equipment, which are being funded through Lieutenant Governor Becky Skillman's, Office of Community and Rural Affairs.
5g) Begin Quarter 3 and ongoing throughout the project	During project implementation the Project Director and Indiana Telecommunications Association members in respective regions will educate local rural community leaders about programs and services available thru the Lieutenant Governor's Office of Community and Rural Affairs and will work collaboratively with this office to secure planning dollars for rural communities (when there is interest) to support local, rural, business devellopment initiatives related to this project.

Stratem 5 Outcome Objective:
By the end of year three, the *Indiana Health Network* will have developed a strategic plan that will insure sustainability of the project past the three-year funding period of the network grant.

Strategy 5 Process Measures:
- Initial strategic planning session implemented during Quarter 1
- Annual strategic planning sessions to review and modify the initial plan in Quarter 1 of year 2
- Utilization of the Rural Health Work model implemented with telecom providers and local communities by Quarter 2
- Implementation of the USAC hospital evaluation to encourage participation in the USF by Quarter 2
- Continue integration of rural health goals and objectives identified by the Office of Community and Rural Affairs and the Indiana State Office of Rural Health
- Identification of potential collaboration with economic development projects that impact rural Indiana will begin during Quarter 2 and throughout the project

◈ **DEMONSTRATE THE EXISTENCE OF A "VIABLE STRATEGIC PLAN FOR AGGREGATING USAGE AMONG HEALTH CARE PROVIDERS WITHIN A STATE OR REGION"[18]**

Strategic Planning:
The Indiana Rural Health Association implements an annual strategic planning session with its Board of Directors, which guides the activities of the association. In August 2006 the board met and revamped this plan by implementing a Root Cause Analysis/Logic Modeling Work Session that was facilitated by Dr. Terrell Zollinger and Dr. Robert Saywell both the Indiana University School of Medicine's Bowen Research Center. During this session the following goals and objectives were developed, which are directly addressed by the *Indiana Health Network,* which include the following:

Performance Goal 1: Increase the rural voice in state and local policy making

Objective 1.1:
Increase communication with and among rural providers (people and organizations)
Potential Activities:
- Develop and expand formal inetworks among similar health care providers as deemed appropriate

Performance Goal 3: Increase access to quality health care among Indiana's rural citizens and communities

Objective 3.1: Reduce barriers to accessing health care services
Potential Activities:
- Collaborate with other organizations (such as AHEC) to introduce health care professional students to rural health care training
- Provide education opportunities for rural health care providers/organizations that address cultural competency issues

Objective 3.2: Improve the quality of the health care provided in rural areas
Potential Activities:
- Offer education and training programs for rural health care providers regarding current clinical treatment guidelines
- Advocate for the adoption and utilization of EMR and other HIT among Indiana rural health providers/professionals

In addition to the strategic plan developed by the Indiana Rural Health Association Board of Directors, those health care providers and other organizations that are partners in the development of the Indiana Statewide Rural Health Network that is currently funded through HRSA's Office of Rural Health Policy will implement a strategic planning session on June 20, 2007 that will also address many of the planning needs of the *Indiana Health Network* that is proposed within this application. This and future strategic planning efforts of the network will be implemented annually or as needed to steer the activities of the network members.

In addition to strategic planning activities, the leaders of the network will work in collaboration with the staff of the Indiana Rural Health Association to implement the 2nd Annual Telehealth Education Track at the 2008 Annual Conference, as well as coordinate ongoing education, training, and support needed to encourage the implementation of telehealth application by health care providers as a component of the *Indiana Health Network.*

❖ **PROVIDE A PROJECT MANAGEMENT PLAN OUTLINING THE PROJECT'S LEADERSHIP AND MANAGMENET STRUCTURE, AS VVELL AS ITS WORK PLAN, SCHEDULE, AND BUDGET[20] (REQUIREMENT 9)**

Work Plan, Schedule/Timeline for Indiana Health Network Activities:
A workplan outlining the activities that will be implemented to insure the successful development, implementation, and utilization of the *Indiana Health Network* has been included on pages 47 - 51. In addition, a schedule/timeline that indicates the time period in which each of the listed activities will be implemented has been included on pages 52.

❖ **STRATEGY FOR LEVERAGING EXISTING TECHNOLOGY TO ADOPT THE MOST EFFICIENT AND COST EFFECTIVE MEANS OF CONNECTING PARTICIPATING HEALTH CARE PROVIDERS[21]**

Technology Plan:
Current Telecommunications Environment in Indiana:
In March 2006 Governor Mitch Daniels signed into law an innovative first of its kind telecommunications reform package that moved Indiana into a leadership position among states and opened up an era of new telecommunications investments across the state. Indiana's telecom reforms were hailed by Industry experts and other governors as the best such bill in America. The law which was pasaed with strong bipartisan support made several major changes to Indiana's outdated telecom regulatory environment including:

- Prohibiting regulation of advanced broadband and information services, as well as non-basic telecommunications services
- Deregulating basic telecommunications service over a three-year period. At the same time, providers are permitted to increase prices by no more than $1 per month each *year* of the transition period. Deregulation is contingent on providers offering broadband access to at least 50 percent of the local telephone exchange area. The state's Lifeline program, which provides financial assistance to individuals whose incomes are up to 150% of the federal poverty limit and who can't afford basic telephone service will be expanded
- Maintaining Indiana Utility Regulatory Commission (IURC) oversight over certain practices, including disputes among providers, interconnection agreements, and universal service, while giving the IURC some consumer protection authority regarding telecom and video service providers

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[20] Federal Communications Commission. Rural Health Care Support Mechanism. WC Docket No. *02-60.* September *2006.* page *6.*
[21] Federal Communications Commission. Rural Health Care **Support** Mechanism. WC Docket No. *02-60.* September *2006.* page *6.*

- Creating a statewide video franchising system to replace local franchise agreements. Current cable franchisees may opt-out or continue local agreements. The bill ensures that local governments continue to receive franchise fees equivalent to those received under
- local agreements and protects local communities' access to government and education channels (called PEG channels)

As a direct result of these sweeping reforms, Indiana has experienced a boom in telecommunications investments statewide including the "High Speed to the Heartland" initiative that will bring new broadband service to **33** rural communities across the state.

To ensure that the development of the *Indiana Health Network* through the FCC Rural Health Care Pilot Program fully leverage:; Indiana's innovative telecommunications environment, health care industry representatives have been working hand-in-hand with the Governor's Office and representatives from the telecommunications sector to develop a proposal that would build on the public-private partnerships that have:been forged as a result of Indiana's telecom reforms. The result of this work has been the formation of an *Indiana Health Network* that provides a vehicle for coordinating the needs of health care providers with the technology investments of private telecom firms. The *Indiana Health Network* and specifically the Indiana Rural Health Association as lead applicant for the network, serves as a neutral convener that can ensure technology investments are meeting the telehealth needs of rural health care providers.

After holding two initial meeting of the *Indiana Health Network* there was a consensus among its members that, given Indiana's recent telecom policy reforms, the best way to enhance Indiana's public and non-profit rural health care providers' access to advanced telecommunications and information services was to use a 'competitivebidding process to help broker private sector investments in rural broadband network construct and connectivity. Such an approach will result in the construction of a dedicated broadband network that connects health care providers across Indiana and at the same time ensures that the connectivity and services over that network are both scaleable, meeting the ever-growing technology needs of the health care industry, and sustainable without continued public investments. In addition, private sector investments in broadband can easily be extended to meet the broader technology needs of the communities in which these rural health care providers are located and will be assisted through the activities of the pilot program. The alternative of a public financed broadband network linking health care providers would discourage current and future private sector investments in broadband and create a costly and duplicative resource.

Implementation Strategy for the Indiana Health Network:
Given the current telecommunications environment and the ability to experience significant cost-savings, the *Indiana Health Network* will be developed through the utilization of local telecom providers that will connect the network/network members to Internet2. By using existing fiber optic networks that are deployed throughout Indiana, the selected telecom companies will provide the services necessary to establish the *Indiana Health Network*. Through the utilization of this model the network will reach more health providers at less cost. For example, the build out costs for the necessary fiber will be significantly lower given the proximity of existing telecom networks to the identified hospitals and other health care providers.

Network Management:

These previously mentioned telecom networks are currently managed by individual carriers thus eliminating the need for a centralized manager, which reduces overhead costs and assists with the long-term sustainability of the project. These private telecommunication providers are experienced and proficient at managing networks and providing technical assistance to their customers given the fact that they employ local technicians whose skill sets meet the requirement of all telecommunication providers. Moreover, individual telecoms traditionally provide the scope and breadth of service needed to effectively manage network activities. In a free market environment individual telecom provider work cooperatively to insure interoperability, which is seen at work on a daily basis in the working of traditional internet, voice, and data transport, which is proven to be highly successful. Service Level Agreements will he established within individual contracts that specify the technical specifications of technical quality of the service with credits for outages, which motivates the telecom provider to act quickly to restore service.

Bandwidth:

The *Indiana Health Network* will work from the foundation that participating hospitals receive at minimum 100 megabyte connections at each participating rural hospital based on the philosophy that these sites will serve as a capacity hub location for other smaller health clinics to interface/interconnect. It is the intent of the *Indiana **Health Network*** that smaller health clinics utilize no less than T-1 connectivity. Broadband connectivity would be scaleable in order to meet the specific needs and financial constraints of the participating health care providers. This philosophy is supported by the findings of the technology study "Bridging the Life Span: Technology in the Future of Indiana's Rural Healthcare Providers" that was completed in April 2007[22].

Network Design Study:

A statewide inventory and mapping of the existing telecommunications infrastructure should be performed before this project begins. Such an evaluation should describe the service availability, type and quality; service providers in each market; network performance; and cost. ***An*** additional survey should be conducted uniformly throughout the state in accordance with other Computer Systems Policy Project (CSPP) recommendations (or other studies in the past 3-5 years) to understand which areas ***are*** underserved, where demand is anticipated, and how gaps in service delivery can he addressed. CSPP is a national association of leading information technology firms.

When selecting the vendor for this work, the Advisory Board for this project will identify interested vendors for the assessment. While information about the telecommunications industry is necessary, it is not the sole selection criteria and different vendor options will be fully explored.

Potential Barriers & Challenges to Implementing Network Activities:

No collaboration ever comes easily; and across the country, efforts such as this one have faced many challenges. The identified challenges of the network include the following:

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[22] Beck & Neufeld, April 2007.

Organizational Turf Issues:
Coordination and planning are vital in the successful implementation of the Indiana Health Network and in fact is the foundation of the process that has been identified. To date, the identified network members have established unprecedented levels of collaboration and cooperation across sectors to develop and submit this application. While this is the case, this positive collaborative working relationships need to be attended to in order for them to be long lasting and productive. A competitive marketplace that creates financial apprehension and distrust can create barriers, however, given the success of the working group to date it is anticipated that these issues can continue to be overcome.

Cost of Information Technology Equipment: One strategy/objective of the network is to increase connectivity among Indiana's rural health care providers and increase the availability of education activities, utilization of telemedicine, and utilization of health information exchange. To achieve this goal, the InHN plana to utilize information technology and video-conferencing. The initial costs for the equipment needed to successfully implement these telehealth applications can be a barrier for many rural health care providers. To overcome this barrier, the network members will work to secure group purchasing agreements with vendors to insure the most competitive pricing, will utilize existing technology of network members, will work to identify those network members that currently have the equipment needed to host video-conferencing, and research other potential funding sources through private, state, and federal sources that could assist with the purchase of needed equipment.

Compatibility of Technology: Several of the participating health care providers currently utilize Information Technology applications, including HIT, video-conferencing, Electronic Medical Records (EMR), as well as others. It is the intent of the I n '' to build upon and utilize existing technology available at the participating rural health organizations to facilitate education activities and network activities/meetings. Although much work has been done to develop common standards for technology usage, the level of integration that can be achieved is often hampered by participants embracing vendor solutions that cannot be easily integrated. This will be addressed by the network by collaborating on future vendor selection and exploring ways to successfully connect existing technology applications.

It is also imperative that while the: network is designed to incorporate the latest technology in regards to data transport such as Ethernet, Multiprotocol Label Switching (MPLS), virtual private networks, it must also be designed to incorporate existing technologies into the new technologies and services especially in regards to connecting smaller clinics and health care facilities in the future.

Data Sharing Standards: Although much work has been done to develop common standards to record and transmit clinical information, the level of integration a community can achieve is often hampered by participants embracing vendor solutions that cannot be easily integrated. This will be addressed by the network by collaborating on the selection of vendors for practice management and electronic health records. This selection process may obviate the need for data interfaces if a common vendor is chosen. If disparate vendors are chosen, the selection process will include the E-Health Collaborative community inoperability standards to allow network members to understand the trade-offs with multiple vendors.

<u>Patient Privacy Concerns:</u> Although HIPAA intended to improve administrative efficiency in health care and increase patient privacy protection, it created the impression that it discouraged the sharing of clinical information. On the contrary, the simplification of its rules has encouraged the creation of systems that communicate with each other. Patients, however, remain unwilling to share their data, especially if they believe it may lead to job discrimination or ineligibility or higher rates of medical insurance. To address this issue, each of the network members will provide education and information to their patients' regarding: the quality and safety benefits of data sharing, as well as, the time savings to individual patients and their family members. Patients will be asked to sign a consent form that will allow appropriate and secure sharing of information among network members.

<u>Physician Legal Liability</u>: The sharing of clinical information may result in liability situations not encountered before. This may delay decision by physicians to adopt electronic systems. The E-Health Collaborative is participating with the Indiana University Law Clinic (funding provided by Lilly Endowment) to assist governance and legal formation issues as a RHIO. This relationship will also provide a mechanism to address and provide education regarding both positive and negative medical legal issues associated with use of electronic health records. In addition, the E-Health Collaborative is working with a newly formed Multi-County Physicians risk retention group, a form of medical malpractice self insurance, to demonstrate the improvements in risk management yielded by EHR.

Network Communication:
The network members will meet a minimum of once per month for network meetings via face-to-face meetings, video-conferences, and/or conference calls, which will be facilitated by the Project Director. The representatives from each participating network organization will participate in these monthly meetings and will be responsible for insuring implementation of network activities at their organization. During these meetings, project implementation goals, strategies, and activities will be discussed. Specifically, the Project Director will provide direction to the members regarding tasks that must be accomplished on a monthly basis in order to successfully implement the activities described in this application. In addition, concerns and obstacles will be discussed, and strategies will be developed to address and overcome these issues.

Monthly progress reports will be provided to each network member and discussed at monthly meetings to document progress made toward achieving process measures. Outcome objectives will be assessed on a quarterly basis and via completion of an annual Network Member Survey. This data will then be used to modify the project as appropriate, implement improvements, and provide assistance as needed to each of the network members. Specifically, each network representative will implement the strategies and activities of the project into the day-to-day operation of their subsequent network organization.

Feedback from network members will be solicited during the monthly meetings, as well as through implementation of the Network Member Survey that will occur annually. In addition, the initial network strategic planning session will occur in Quarter 1 of the project, to solicit information and direction from the network members regarding the implementation strategies of the network.

The normalization of telemedicine within clinical service provision requires integrating the application closely within the day to day activities of the healthcare delivery team. Qualitative

studies tell us that successful implementation of telemedicine requires a positive link with a policy level sponsor, successful structural integration, development of organizational structures, the enrollment of cohesive cooperative groups, as well as the ability of clinicians to accommodate telemedicine through the development of new protocols and procedures.[23]

Integration of Network Activities by Network Member Organizations:

The normalization of telemedicine within clinical service provision requires integrating the application closely within the day to day activities of the healthcare delivery team. Qualitative studies tell us that successful implementation of telemedicine requires a positive link with a policy level sponsor, successful structural integration, development of organizational structures, the enrollment of cohesive cooperative groups, as well as the ability of clinicians to accommodate telemedicine through the development of new protocols and procedures.[24]

In order to ensure that each or these critical elements are addressed, The Indiana Health Network plans to collaborate with the Midwest Alliance for Telehealth and Technology Resources (MATTeR). The resource center is a partnership with Marquette General Hospital and Purdue University for providing leadership and training to other organizations interested in telemedicine. This multiparty resource center focuses on improving the accessibility and quality of health care by supporting telehealth networks designed to meet the needs of rural and underserved residents within Kansas, Indiana, Michigan and the greater region. In addition, MATTeR conducts telehealth research and coordinates evaluation activities with the other three resource centers. One key member of the MATTeR team is Pamella Whitten PhD, a well published telehealth advocate who played an instrumental role in initiating the Indiana Telehealth Advisory Consortium and now serves as a partner member.

The Indiana Health Network will (coordinatewith MATTeR to establish a training curriculum that will provide organizations looking to adopt telemedicine applications with the necessary information to ensure successful integration. This training will increase the likelihood that telemedicine will become commonplace in Indiana's hospitals and clinics.

◈ **INDICATE TO WHAT EXTENT THE NETWORK CAN BE SELF-SUSTAINING ONCE ESTABLISHED"** (REQUIREMENT 11)

Sustainability Strategies:

The following section provides a :foundation for network sustainability strategies, however, additional strategies will be researched and identified to insure sustainability. The plan that is outlined in this application calls for the use of telecom market forces to maintain and grow the fiber connections to Indiana's rural and Critical Access Hospitals. By utilizing the facilities and resources of Indiana's telecommunications companies, this plan expects that other health and non-health customers will also utilize the network connections providing added long term

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[23] May, Carl, et al. "Understanding the Normalization of Telemedicine Services Through Qualitative Evaluation" J Am Med Inform Assoc. 2003; IO: 596-604

[24] May, Carl, et al. "Understanding the Normalization of Telemedicine Services Through Qualitative Evaluation" J Am Med Inform Assoc. 2003; 10: 596-604

[25] Federal Communications Commission,. Rural Health Care Support Mechanism. WC Docket No. 02-60. September 2006. page 6.

support. Other long-term sustainability strategies will be developed by the network members as a part of the network strategic planning process.

◈ IDENTIFY THE SOURCE OF FINANCIAL SUPPORT AND ANTICIPATED REVENUES THAT WILL PAY FOR COSTS NOT COVERED BY THE FUND[26] (REQUIREMENT 5)

State of Indiana's Support and Match Requirement: This network is significantly strengthened by the commitment of participation of the State of Indiana through the Office of Governor Mitch Daniels, the Indiana Office of Community and Rural Affairs, the Indiana State Department of Health/Indiana State Office of Rural Health, and Indiana Office of Technology. The state has committed to working with the Indiana Rural Health Association and other grant partners to provide the 15% match requirement as established by the FCC for the Rural Health Care Pilot Program. Among the possible sources of funds that can be pursued to fulfill the match requirement are:

- Existing state general fund revenue
- Other federal grant funding received by state agencies including but not limited to the Indiana State Department of Health, Family and Social Services Administration, and the Indiana Office of Community and Rural Affairs
- Private telecommunications firms that compete for and win contracts under this pilot program
- Health care providers that receive broadband services as a result of the grant
- Foundations or philanthropic organizations
- Local governments

To ensure this initiative is sustainable and that all partners are invested in and dedicated to its success, the state believes it is important that the match requirement be shared appropriately among the grant's public, private, and non-profit beneficiaries. Given the level of support and commitment from the State of Indiana, it is the intention of the *Indiana Health Network* to apply for funding from the Indiana Office of Community Affairs for a Rural Capacity Grant to assist with the start-up of *Indiana Health Network* activities.

Strategic Planning and Sustainability: Members from the network will participate in strategic planning activities, which will involve expert strategic and collaborative planning consultants who are participating in other telehealth application efforts. This effort will help to create a sustainable business model for telemedicine applications and health information exchange. The network members will hold annual !strategic planning sessions and will create a strategic planning document that will be reviewed to evaluate execution of the network workplan with all members. The strategic plan will 'help network members execute the proposed activities and will identify economic development opportunities for network members throughout the State of Indiana. The strategic planning consultant will facilitate a review/update of the networks strategic annually throughout the project.

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[26] Federal Communications Commission. Rural Health Care Support Mechanism. **WC** Docket No. 02-60 September 2006. page 6.

im⊃ rs ⁊ꝫ꜀l r Health Care Services Provided Via Telemedicine: The Center for Medicare and Medicaid Sei vices (CMS) formally endorsed the use of telemedicine technologies for patient ⊃ꝑ ti when Congress passed the Balanced Budget Act of 1997 (BBA). This mandated that Medicare reimburse care that was provided via telemedicine and fund telemedicine demonstration projects. Unfortunately, i ꝺꞏi legislation was ⊃ :e d required that a referring practitioner be present with the patient and that teleconsultant fees be sl r veen the consulting physician and the referring physician. This legislation also limited reimbursement of l dicine ꞁltꜧ to beneficiaries located in ꝺl H ꜳ ꝺl Shortage areas (HPSA's)

On ꜳ 1 2001, the ꜳfits Imprc t and Protection Act of 2000 (BIPA) was passed and this amended section 1834 of the BBA which added a ꝺn ꞇ reimbursement for ꜞh services. Because of this new legislation, the rural ꝺuireme r riꝼ s were removed and now included Ᵹ county not located in a Metropolitan Statistical Area (N A) Though tl d a significant improvement in the policy and increased ꜞh numhcr of programs able to bill for services, tꞁ policy remains restrictive.

Indiana's Office of Family and Social Services recently published its final rulc 405 IAC 538 on the reimbursement of telemedicine services The rule desciibes telemedicine ices and outlines the circumstances in which Indiana Medicaid will reimburse for ꜞl services. While the ꝑ is somewhat limited in its breadth and depth, it ꜞs mal an encouraging change in the rsꝫm ꞇꞏ for Indiana.
http://www.in.gov/legislative/iac/20070328 IR ꞁ05050 ꝺ.xml

Indiana currently does t have any legislation that mandates privatc ꝑ t p for telemedicine sei There are currently five states (California, Kentucky, ꝫ, ꝺl l i i ꝺ) that h d this type of ꝺlatic Indiana's health care providers are hopeful that given the recent passing of the Medicaid telemedicine rule that private payers will shortly adopt similar policies

In addition to the new Medicaid policy, ꜱss ha been made locally with ꞇ ꝺ carriers. ꞇ, the largcst insurer in the state, has agreed to reimburse for all outpatient services that Medicare currently covers but has not issued a formal written policy M Plan issued a telemedicine policy (NPD1 13), effective August 1, 2005 This policy also reflects tl CMS ꝺli d covers tꞁ identical 54 evaluation and management CP꜠ 1 Mc importantly, neither commercial insurer h placed any reimbursement restrictions based on geographical location of the patient. Unite꜠ I꜀ has also issued a written policy. The above named policies can be d at www.IndianaTAC.org.

ꝺl itꝺ from Network M꜀ Rural ꜞ꜀lth care providers and rural communitics are heavily ince d to iden ꞁ ꞃ keeping health care delivery within the local community given the ꝑ economic benefit. Accordingly, both local health care and community ꞁ꜀ are motivated to utilize telehcalth applications through the increase in t ꜞit Ᵹen that it will enhance service delivery; improve q ꞁity, ꞇꞏ diagnosis tiꞏ for physicians, specifically radiologists; and improve patient and physician t ꜞtion. ꝺ dditi utilization of high-speed connectivity for t ꞁꞏ ꝺ may

also reduce mortality. In addition, new technology is putting a greater demand on connectivity. For example, updated CT, MRI, and ultrasound technology is mandating that hospitals update and upgrade technology plans to insure the high-speed connectivity and capacity needed to transfer data derived from these radiology applications. Accordingly, rural hospitals are supportive of the activities of the Indiana Health Network and will be motivated to pay reasonable fees for access to the network and the high-speed connectivity that it provides.

Support through HRSA. Office of Rural Health Policy Network Planning Grant: **As** mentioned previously, the Indiana Rural Health Association is currently implementing a Network Planning Grant from HRSA's Office of Rural Health Policy to develop the Indiana Statewide Rural Health Network, a network comprised of 21 health care organizations. The participating organizations include the Indiana Hospital&Health Association, Health Care Excel, Indiana's Quality Improvement Organization; Union Hospital's Richard G. Lugar Center for Rural Health; 14 rural hospitals of which 11 are Critical .Access Hospital (rural hospitals with 25 beds or less); and six federally designated Rural Health Clinics. The goals, objectives, and problems addressed in this federally funded project will be directly impacted by establishing connectivity among participating health care providers, that would be made possible via the *Indiana Health Network.* In addition, it is anticipated that the funding associated with this project will help offset a portion the costs associated with the Indiana Health Network that *are* not covered by the FCC.

◈ **DESCRIBE HOW FOR-PROFIT NETWORK PARTICIPANTS WILL PAY THEIR FAIR SHARE OF THE NETWORK COSTS?' (REQUIREMENT 4)**

Membership Fees: It is anticipated that users of the network will pay fees in the same model as is utilized for current telecom services billing. The telecom providers that construct the network will work with the Indiana Health Network, advisory board members, and legal consultation to negotiate the way in which the network fees will be charged, collected, and allocated to fund the activities of the network. This issue will be addressed as a component of the Financial Operations Committee.

Indiana Office of Rural Health – Rural Health Works Project – 2004 to Present: As mentioned previously, the Indiana Office of 'Rural Health, in conjunction with the Indiana Rural Health Association engaged in rural economic development studies in 21 of 35 Critical Access Hospital markets from 2003 to 2005 that implemented the Rural Health Works model to evaluate the economic impact of local health system and understand its economic value to the market and community. The process leads to increased use and expansion of health services and ensures the existence of health services and demonstrates to communities how critical the health care industry is to the economic well being of a community. For purposes of this project and the *Indiana Health Network,* there will be a strong effort to make each rural hospital the anchor-tenant in rural communities for the bandwidth services that are being delivered. In order to achieve sustainability of the Indiana Health Network and overall telecommunications infrastructure both rural communities and rural hospitals must work together.

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[27] Federal Communications Commission. Rural Health Care Support Mechanism. WC Docket No. 02-60. September 2006. page *6.*

Given the demonstrated impact of health care on local rural communities, it is believed that there is a strong case for building community partnerships with each local hospital and making sure that the *Indiana Health Network* is a part of local economic development planning. If rural hospitals can link industry to the network then sustainability will follow given the fact that there will be increased utilization of broadband.

Rural Indiana Strategy for Excellence (RISE) *2020:* In July *2005,* Lieutenant Governor Becky Skillman appointed a statewide Strategic Planning Committee, to assist the Daniels Administration in framing a vision and strategic framework for the newly created Indiana Office of Community and Rural Affairs, and to link these governmental efforts with other public, private and philanthropic initiatives, to enhance the quality of life and economic vitality of Indiana's rural countryside.

In the ensuing six months, over 150 Hoosiers, representing the broad diversity of institutions, organizations, governments and constituencies of our state, have worked diligently to create a contemporary, dynamic vision for the future of rural Indiana, and to build the platform and mobilize the constituencies necessary to integrate these disparate resources and begin the common journey toward this vision. At one stage in the process in *2006,* the following goals were outlined in the RISE *2020* initiative. Nine of the eleven goals of RISE *2020* relate directly to the work of the *Indiana Health Network* as described in this document.

Financial Sustainability: The FCC Rural Telemedicine grant includes an upgrade in technology at each rural hospital site to allow them to connect to the Indiana Health Network. In our planning efforts, we have identified each rural hospital as the "anchor customer" in each rural community. We have found that hospitals are the center of most healthcare related services in small communities. Economic studies in Indiana show that for every $1 dollar of healthcare spent in a small rural community, there is another $9 dollars that follow in similar or connected services. Therefore, economic inter-connectivity to physician offices, transportation services, equipment providers, social services agencies, home care services, or durable medical equipment providers occurs instantly by creating this linkage.

In addition, hospitals are often the center of local economic development discussions due to the provision of health care services they provide to local employers. Hospitals are often the largest employers in small rural markets. They often consist of the largest total number user of computers users, and therefore need strong internet connectivity. Hospital administrators are also frequent participants in local community planning exercises and actively working with local business leaders to discuss economic development. This discussion includes that relating to community needs assessments and holding local community leaders accountable for enhancing services so that rural communities can remain local in getting the services they need to function effectively in all areas of their lives, including healthcare.

Therefore, it is our professional judgment that using the rural hospitals as the anchor customer will provide a strong economic position for future growth of the network in each community, which will enhance the overall network's financial sustainability.

EVALUATIVE MEASURES
Measuring Progress and Results:
The overall vision of the Indiana Health Network is *to establish a high speed health telecommunication information system capable of erasing distance as a barrier to accessing high quality health care for all people in Indiana.* To achieve this vision, the network members have developed goals, strategies, and activities that will be measured by both outcome objectives and process measures. Each of these outcome objectives and process measures will be monitored by the Project Director in regards to completion times, obstacles encountered, methods that work, etc. In addition, an outside evaluator will be sought from one of the many qualified institutions of higher learning that have contributed to this application. Potential evaluators include the Purdue Regenstrief Center for Healthcare Engineering, Midwest Alliance for Telehealth and Technology Resources, Indiana University's Center for Health Policy, and Indiana University's Global Research Network Operations Center, just to name a few.

The Indiana Health Network plans to apply for funding via the Indiana Office of Community and Rural Affairs, Rural Capacity Grant. It is the intention of the network to identify an outside evaluator that will be paid for via funds from this grant. Reporting requirements of the FCC will be implemented in the overall evaluation plan in addition to items identified by the evaluator. The evaluator would develop, at a minimum, annual evaluation reports that would be shared with network members, statewide partner organizations, and ultimately the FCC to aid in recommendations and programmatic direction of the Rural Health Care Pilot Program.

IMPACT

◆ **INDICATE HOW THE TELEMEDICINE PROGRAM WILL BE COORDINATED THROUGHOUT THE STATE OR REGION" (REQUIREMENT 10)**

The *Indiana Health Network* will work to insure that the development and utilization of telehealth applications are expanded and coordinated in a statewide fashion. Below is a listing of telehealth application that would be implemented over the network. Many of these applications require regional and/or statewide coordination efforts to insure success.

Potential Telehealth Applications that would be Implemented Over the Network:
Healthcare information is inherently mobile and therefore, the need for information to be ubiquitously available is essential to improving access to quality care especially in rural areas. There are currently a multitude of clinical applications at a provider's disposal that help increase efficiencies, improve diagnostic accuracy as well as support reliable care and reduced medical errors. Electronic information and telecommunications applications that support long distance clinical health care, patient and professional health related education and health care administration have been integrated into systems of care across Indiana. The section that follows provides an overview of several important technology based clinical applications that can be further developed and incorporated into the continuum of care currently available in rural areas given expanded connectivity.

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[28] Federal Communications Commission. Rural Health Care **Support** Mechanism. WC Docket No. 02-60. September 2006. page 6.

Electronic Medical Records: **An** electronic medical record (EMR) is a computer-based patient medical record. **An** EMR facilitates fast efficient access of clinical patient data by providers at any given location. Many EMRs not only assist with the common tasks involved with providing care, they will also assist with processing claims data, allow electronic order entry, order prescriptions as well as checking for drug interactions and sending and viewing lab or radiology data.

Adoption of electronic medical records has been slow. A mere **16%** of primary care physicians across the United States use electronic medical records.[29] Limitations in software, hardware, and networking technologies have made EMRs difficult to affordably implement in small, rural, budget conscious, multi-location healthcare organizations. Improving connectivity across Indiana will help leverage the adoption of EMRs.

EMRs are a powerful tool for managing patient information; yet, they lack the ability to obtain or share information electronically beyond the practice, group or hospital system they are being utilized in. Subsequently, physicians and office staff are forced to continue using costly and inefficient paper-based communication workflows. Secure clinical messaging provides an alternative to this.

Secure Clinical Messaging: Secure clinical messaging is an extension of store and forward telemedicine and includes multiple: aspects of electronic messaging. Despite being very similar to secure personal messaging like email it encompasses a wider range of clinical and reporting services.

Most clinical messaging systems allow for the attachment of images as well as providing secure access to other forms of stored patient information. Secure clinical messaging systems will generate automated emails from the central server when new laboratory results or other patient specific data becomes available.

In addition to giving providers access to patient information, clinical messaging systems often support common patient-driven communication tasks like scheduling appointments and requesting prescription refills. Some systems also feature the added benefit of allowing patients to enter their own health records. This function assists providers in maintaining the accuracy of their records by providing a mechanism for patients to update fields such as immunizations, height, and weight or additional parameters that may change on a regular basis.

Because these records are patient entered they differ from physician records in important ways. Patients are encouraged to use these systems to access their records. This new concept has proven beneficial for teaching patients better self-management skills for chronic diseases like diabetes mellitus.

In general, clinical messaging systems do not require dedicated networking connections between facilities. **A** central server located either at a hosting facility on the public internet or at a clinical site, houses the messages and patient information. Users access the server through a secure web

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[29] Johnston, Doughlas, et al. "The Value of Computerize Pmvider Order Entry in **Ambulatory** Settings: Executive Preview." WEllesley, **MA:** Center for Information Technology Leadership, 2003

browser by providing a username, password, and other identifying information. Messages remain on the server and are viewed and managed through the browser over the encrypted connection. In this way sensitive patient information can be accessed without it ever leaving the central server or entering the public email system.

Health Information Exchange and Interoperability (HIEI): Both the Indiana Health Information Exchange and Bloomington's E-Health Collaborative are examples of Regional Health Information Organizations (RHIO) within the State of Indiana. "HIEI provides the capability to electronically move clinical information between disparate healthcare information systems while maintaining the meaning of the information being exchanged. The goal is to facilitate access to and retrieval of clinical data to provide safer. timelier, efficient, effective. equitable, patient-centered care"[30]. The Indiand Health Network will support the implementation of HIEI throughout the State of Indiana and potentially the Midwest Region through collaboration with Purdue MATTeR that has established partnerships in Indiana, Michigan, and Kansas.

Teleradiology: Teleradiology is currently the most successful and widely used telehealth application. Any type of radiological image can be captured as a digital image or converted to digital from traditional hard copy film. Once in digital form the image can be transferred as simply as any other file type using any kind of messaging system. In the case of tele-radiology, however, the need for security in 'transferringimages, the range of possible file types, and the sheer size of some radiological images make the transfer of these files much more complicated.

To manage this complexity, picture archiving and communications systems (PACS) were developed. These systems support the range of digital image file types, allow for storage, retrieval, viewing, searching, and marking up of digital images. The systems will also allow for the secure transfer of images to remote sites for reading and reporting. Web based versions allow physicians to remotely dial into central servers to view their patients' images from any accessible location.

Live Interactive Telemedicine: Telemedicine is the provision of clinical services at a distance. Most practical definitions of telemedicine include the concept of real time interactive video connections such as is available using commodity videoconferencing equipment. Connections like this can support a wide variety of medical services, including many specialty services. This application however requires large amounts of bandwidth to be successfully implemented.

One particular application of benefit to rural areas in particular is that of tele-stroke program. These programs highlight the importance of large scale electronic medical record systems, secure clinical messaging, and tele-radiology given the fact that in rural areas throughout America, care for patients experiencing a stroke often does not adhere to published guidelines. According to 2002 data from the American Heart Association, Indiana ranked 36th in the U.S. with a coronary heart disease age-adjusted death rate of 167.8 persons per 100,000 population. The American

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[30] Source: eHealth Initiative, Second Annual Survey of State, Regional and Community-based Health Information Exchange Initiatives and Organizations, August. 2005